

# Auto Bytes

Supply chain in the automotive sector – key developments and automation opportunities

December 2022



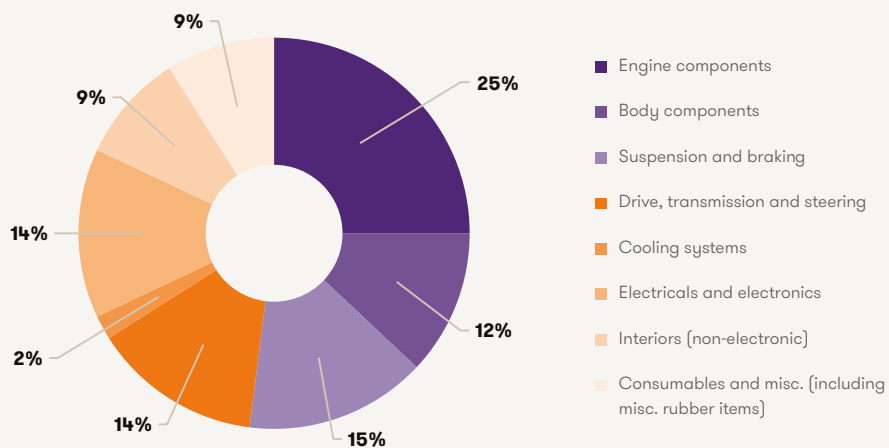


# Auto components industry in India

## 1.1. Auto ancillaries industry

The industry is currently valued at USD 56.5 billion and accounts for 7.1% of India's gross domestic product and employs as many as 5 million people, directly and indirectly. With 100% foreign direct investment (FDI) allowed under the automatic route for the auto components sector, the projected increase in the electric vehicles (EV) market, as well as competitive advantage enjoyed by India, both in terms of cost-effective manufacturing base and being the second largest producer of steel, India's auto components industry is all set to become third largest in the world by 2025.

### FY22: Auto components sales: By category



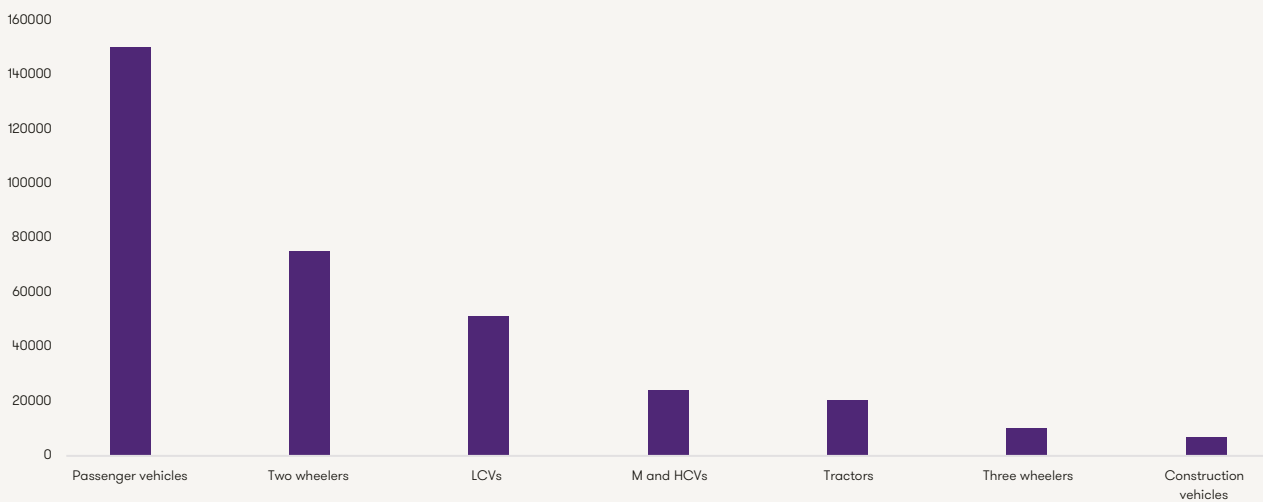
Total sales of the auto components industry in FY22: INR 4.22 lakh crore (USD 56.5 billion) | y-o-y growth: 23%

Source: Automotive Component Manufacturers Association (ACMA)

The industry can be classified into the organised and unorganised sectors. The organised sector caters to original component manufacturers (OEMs) and consist of high-precision instruments, contributing approximately 81% of sales of the total industry (as per FY22 sales), while the unorganised sector includes low-value products and caters mostly to the aftermarket category, making up the reminder 19% of the sector's sales.

The graph below shows the breakup of auto components sales to the OEMs by segments. While passenger vehicles make up for 44% of the total sales, followed by two-wheelers at 22%, the commercial vehicle segment is slowly catching up, especially with the growth trajectory it is on.

### FY22: Auto components sales: By segment (in INR crore)

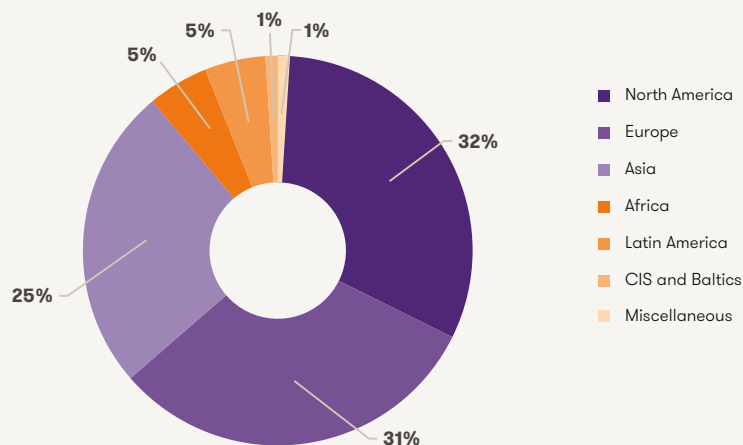


Total sales of auto components to OEMs in FY22: INR 3.41 lakh crore (USD 45.8 billion) | y-o-y growth: 22%

Source: ACMA

Europe and North America are the major importers of Indian auto components and account for nearly two-thirds of the exports from India.

### FY22: Region-wise exports



Total exports of auto components FY22: USD 19 billion | y-o-y growth: 43%

Source: ACMA



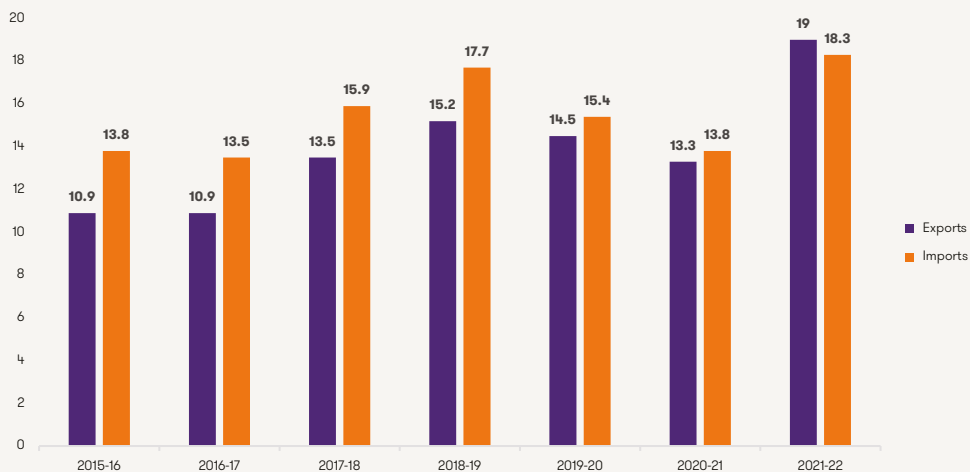


- India's manufacturers are gradually localising the supply chain, leading to higher vertical integration and production of value-added products within the country.
- Manufacturers globally are diversifying their supply chains and are keen towards sourcing their suppliers outside of China, to ensure continuity in business operations and reduce dependence on a single country. India emerged as a favourable cost-effective alternative for diversification, yielding direct benefits of the China plus one strategy.



India's auto components sector has always imported more than it has exported. However, for the first time ever in FY22, the industry saw a significant USD 700 million trade surplus in FY22. While India's auto components import too grew by approximately 33% in FY22, exports grew at a much faster rate of approximately 43%.

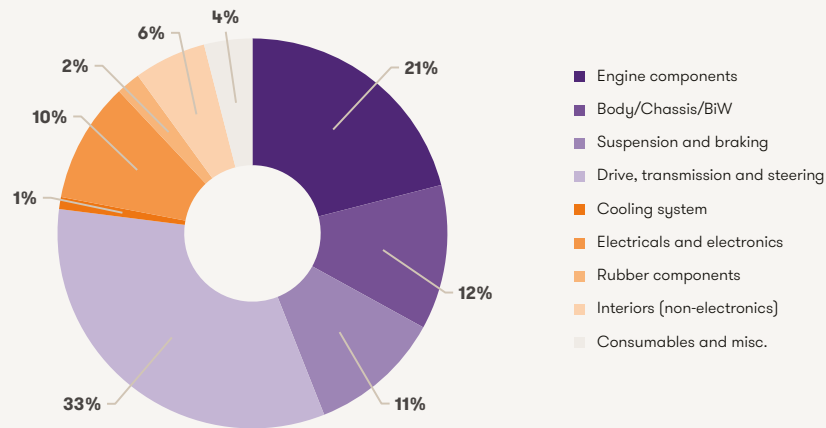
### Analysis of trade (in USD billion)



Source: ACMA

For the first time ever, in FY22, the auto components industry has emerged from a trade deficit and reported a trade surplus of USD 700 million. As per the India Brand Equity Foundation (IBEF), exports are expected to touch USD 80 billion by 2026 at a CAGR of 43%.

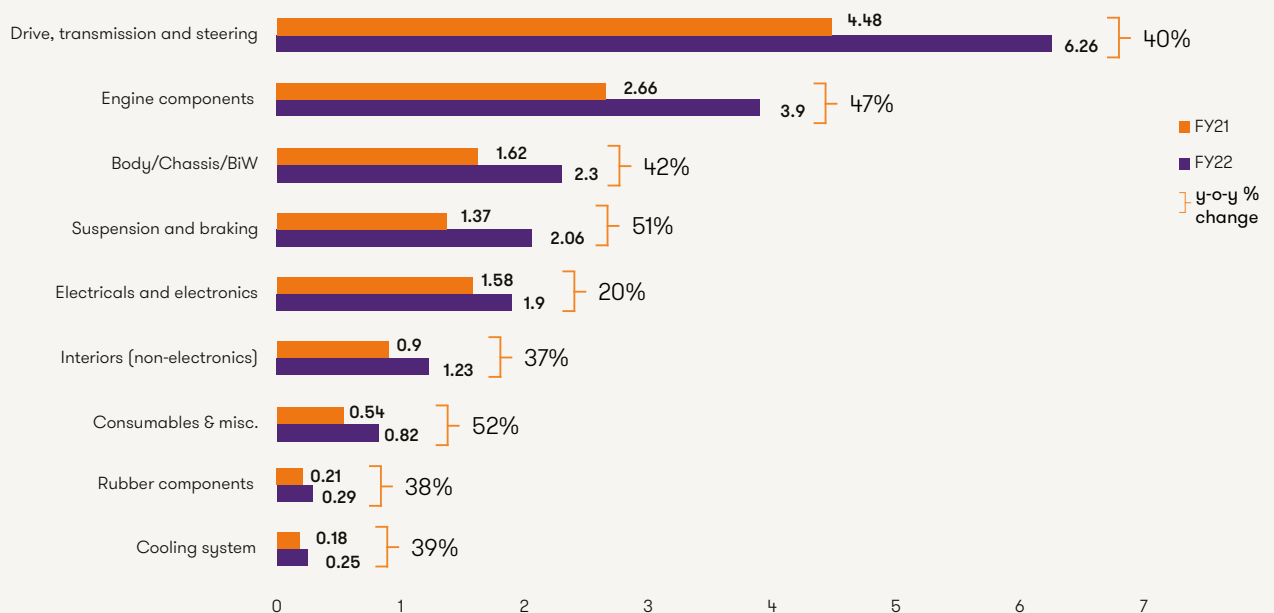
## Key auto components exported



Source: ACMA

Drive transmission and steering components were the most exported in FY22, and registered a y-o-y growth of 40% in exported quantities.

## Exports breakup of key auto components (in USD billion)



Source: ACMA



## 1.2. Impact of movement in raw material prices

The cost of raw materials account for approximately 65-70% of the total revenue. Raw materials include both, direct (raw material, bought out products) as well as indirect (production consumables, tools).

Since raw materials are such a vital component of the overall costs, significant efforts are involved in managing and tracking such cost elements. Sourcing strategy of automotive components is partly controlled by OEMs and partly by their own sourcing function.

There have been sharp fluctuations in input prices- primarily for steel and aluminum over the last 18-20 months. Additionally, with CAPEX for auto-component industry expected to witness a step up of approximately 30%, driven by the resurgence of sales within the sector coupled with strong demand for EVs, working capital will also be expected to fluctuate due to as an outcome of elevated commodity prices. Thus, commodity prices will be one of the pertinent factors guiding operating margins across the value chain.

Due to global supply constraints in FY22 (caused by geopolitical tensions, and lockdowns in China), the cost of raw materials per unit went up by 11% for the auto components industry. With steel and aluminum prices dropping by 9% and 15% respectively in June-July 2022, as compared to the Q4FY22 average, raw material prices are gradually softening and are on a downward trend. Overall, the current lack of increase in commodity prices such as steel, aluminum and plastic in tandem with an increase in demand is leading to operating leverage due to which the margins are expected to improve by 20-40 basis points year-on-year to 7.5-8.5%, as per CRISIL research.

### **Price settlements between OEMs and auto-component manufactures**

As the automotive industry gradually moves to vertical integration to enhance operational efficiencies, there is an enhanced alignment between OEMs and component suppliers to ensure sourcing and supply of critical components and commodities needed to produce the vehicles. With the continuous movement in raw material prices, as well as fluctuations in utilising the plant capacity owing to interruptions in production and supply chains, this gives rise to price differences introduced retrospectively, which are adjusted via price amendments supplementary invoices.





# Impact of price fluctuations in raw materials

Supplementary invoices are raised by the component manufacturers to account for price differences introduced retrospectively. Post the implementation of the GST, efforts have increased to raise such invoices and reconciling them with OEMs. The lack of adequate expertise and technology makes it challenging and prone to inaccuracies.

Some of the challenges faced by the component manufacturers in the lifecycle of supplementary invoices are listed below:

- Unreconciled balances with OEMs at the end of the period
- Unwarranted transparency in cost elements for claiming cost pass through
- Intensive manual effort in calculation of pass through
- Impact on working capital due to time difference
- Higher turnaround time for reconciliation
- Timing difference due to reconciliation issues
- Increased documentation for provisions calculation
- Multiple period spill over impacts profitability of component manufacturers



### 1.3. Deployment of advanced automation tools like robotic process automation to expediate invoice creation and reconciliation

Robotic process automation (RPA) is a way of automating business processes based on pre-programmed sets of rules. Many time-consuming and repetitive tasks which are vulnerable to human errors can be performed by RPA tools. It helps in interacting with suppliers, dealers and end-consumers by way of efficient and optimal process flow.

#### Benefits of RPA:

##### Accuracy of process

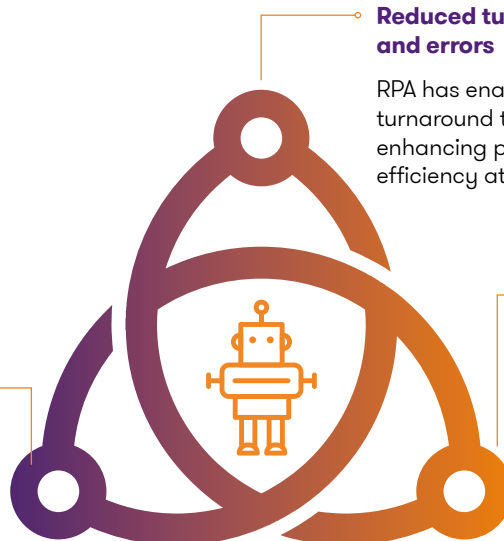
End-to-end automated solution leads to high precision and accuracy levels

##### Reduced turnaround time and errors

RPA has enabled a quicker turnaround time, while enhancing productivity and efficiency at a lower cost

##### Lower average handling time

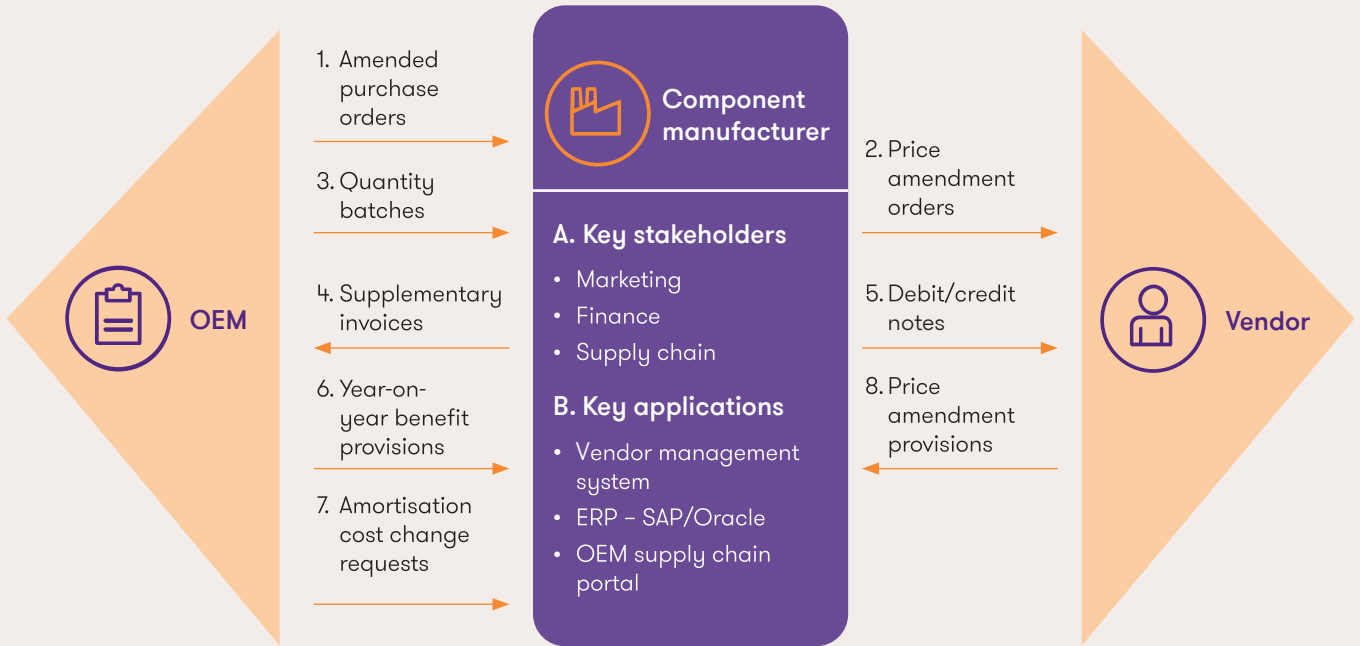
RPA has helped the automotive industry to bring down the average time taken to process an invoice from a day to less than five minutes



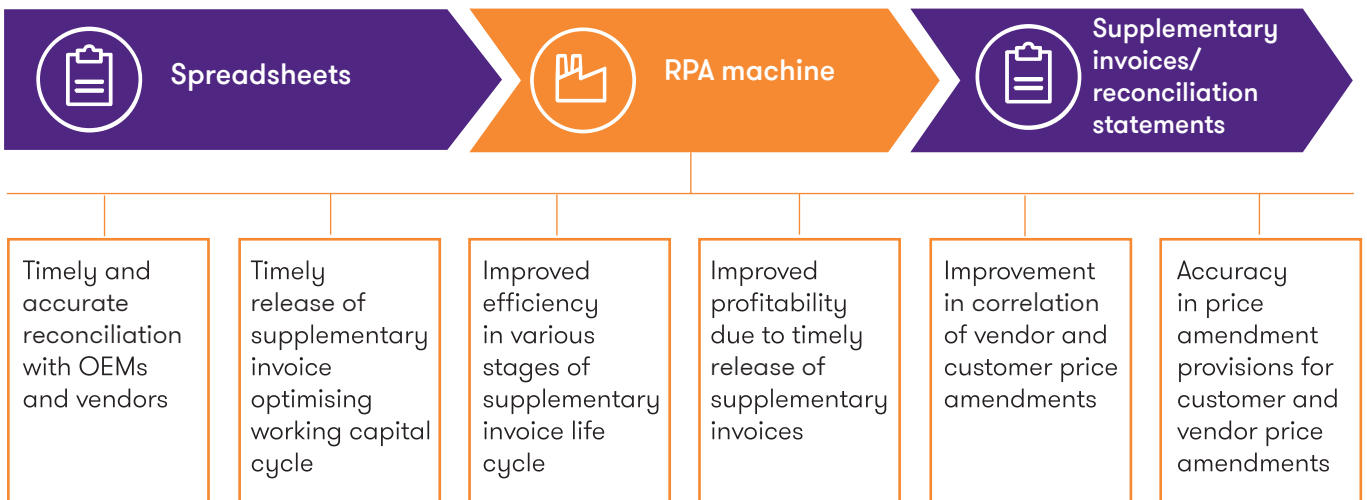


# Deploying RPA in supplementary invoice creation and reconciliation

How RPA can be deployed in the overall lifecycle of supplementary invoice creation and reconciliation



## Benefits of deploying RPA in supplementary invoice lifecycle



As the automotive industry is ready to dive into FY24 with a positive outlook, the growth of the auto-component industry will be driven by factors such as increase in demand for passenger vehicles, stability in tractor demand, recovery in sales for commercial vehicles, among others. To seize growth opportunities and scale up with the opportunities amidst global uncertainties, the industry should focus on innovation in technology, production capabilities and operational efficiencies.

To that effect, the auto components manufacturers must streamline supplementary invoicing to ensure optimisation of operational costs as well.



# Notes

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## Acknowledgements

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